PRENTICE COMPUTER CENTRE

UNIVERSITY OF QUEENSLAND, ST. LUCIA, QUEENSLAND, AUSTRALIA. 4067.

NEWSLETTER

N-266 24-August-81

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Authorized by the Director of the Computer Centre

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1.Ø NEW PROCEDURES FOR REQUESTING SMALL JOBS OF WORK

To cut down on overheads, as from September 1981 the Centre will be using a new mechanism to charge for small jobs such as magnetic tape conversions, SPSS runs and small hardware jobs. Users will be requested to fill out a simple form containing a description of the work to be done and the account to be charged. A copy of this form will then be sent to the departmental Administration Officer for reconciliation. The work will then be billed via our normal charging system.

Di Ball
extension 3471

2.Ø ATOPLT's TRIP TO THE DOCTOR

There was a small problem reported with ATOPLT, so it was sent straight off to the doctor. A few pills, a "good strong cuppa", and now all's well.

The problem occurred when drawing integer tick values. In cases when the tick value was less than 1, ATOPLT would give you an integer mantissa - but the wrong value exponent. The data points were in the correct place.

They can cure that now. ATOPLT has been fixed so that when you tell it to plot a tick value of .25 as an integer, the correct value of 25*1Ø**-3 is plotted. If you have refrained from using ATOPLT because of this, please give it a try. For those of you who had never noticed anything wrong, ignore this whole article.

Any comments, queries, or worries concerning ATOPLT will be accepted by the Duty Programmer on ext. 3Ø25

Mark Williams
extension 2837

3.Ø SPSS CORNER - SPSS AND VAX

The following guidelines, suggestions and warnings may be found helpful by SPSS users wishing to process jobs on the VAX system, especially where the job has been begun on the KL1Ø.

3.1 Transfer of existing files to the VAX

The duplication of files from the KL1Ø to the VAX is accomplished using the program NETACC, which must be activated from the KL1Ø.

In particular, for those wishing to transfer files associated with SPSS projects, the following points should be observed:

(a) Only ASCII files may be used - thus, SPSS description (control) files and raw data files will be handled by NETACC, but not SPSS system-files (i.e. files preserved by a SAVE FILE card).

(b) To reconstruct a raw data file for a system-file on the KL1Ø, an SPSS run should be used which incorporates a WRITE CASES card.

But, if the intent is to produce a raw data file for subsequent transferral to the VAX using NETACC, ensure that the format given in the specification of the WRITE CASES card does not produce long lines,

e.g. instead of

```
                WRITE CASES        (1ØØF2.Ø)V1 to V1ØØ
use
                WRITE CASES        (5ØF2.Ø/5ØF2.Ø)V1 to V1ØØ
```

NETACC does not handle long records; nor does the VAX command TYPE.

3.2 To run SPSS on the VAX

(a) If you are using a new data file (which will be necessary at least once), SPSS expects to read the data from file FORØØ8.DAT and to write the results to file FORØØ6.DAT.

To allow data to be read from the desired raw data file, two procedures are available:

(i) $ RENAME TEST.DAT FORØØ8 (where your data file is named TEST.DAT)

[or $RENAME
$FROM: TEST.DAT
$TO: FORØØ8]

or (ii) $ ASSIGN TEST.DAT FORØØ8

The second procedure is recommended since it saves the trouble of renaming the data file back to its original name at the completion of the job.

To control the file for output (as (ii) above does for input), issue the following command:

$ASSIGN TEST.OUT FORØØ6 (where you wish the output to be to TEST.OUT)

(b) Assuming the necessary ASSIGN commands have been given, SPSS is then run as follows:

$SPSS
$Enter name of control file: TEST.SPS

[Note: In the VAX implementation of SPSS, the default filetype (extension) for the control file is not .SPS, but .DAT. For consistency with names of files on the KL1Ø, you may prefer to continue giving such files names of the form X.SPS; if so, then you must give the complete name (i.e. TEST.SPS not just TEST) in response to the prompt above.]

$Enter workspace in bytes: *
$Enter labelspace in bytes: *

* The term "workspace" used here refers to total space (i.e. workspace + transpace, divided in the ratio 7:1 for workspace:transpace (unless amended by the use of an ALLOCATE card). The default values are 8Ø (for workspace) and 3Ø (for labelspace), where 8Ø denotes 8ØØØØ characters and 3Ø denotes 3ØØØØ characters. (You may not enter the value Ø for labelspace).

(c) Of course, once a run has been performed which includes a SAVE FILE card, the ASSIGN command involving FORØØ8 is no longer necessary in subsequent runs, being replaced within the SPSS description file by the SET FILE card.

Note: In the preliminary VAX document VAXVMS.MEM, reference was made to a "complete" form of the SPSS command,

viz. $SPSS /OUTPUT=TEST.OUT TEXT.SPS 8Ø 3Ø

as an alternative to the combination of both $ASSIGN TEST.OUT FORØØ6

and the SPSS "command sequence" described in (b) above.

$ASSIGN TEST.OUT FORØØ6 command precedes it.

3.3 Names for SPSS files

As noted above, the default filetype for the description file in VAX-SPSS is .DAT, not .SPS; also, the default output file is FORØØ6.DAT irrespective of the name of the description file. This last point should be kept in mind where (i) you decide not to use the ASSIGN command involving FORØØ6 to control output and (ii) at the same time, you initiate a sequence of SPSS runs. In this situation, the successive outputs will be written to FORØØ6.DAT;1, FORØØ6.DAT;2, FORØØ6.DAT;3 etc. But, remember that automatic purging of files occurs which allows no more than three versions to be retained.

3.4 SPSS and Editors

VAX-SPSS does not accept line-sequenced files. Therefore, in particular, if creating or editing files for SPSS using the VAX default editor SOS, be sure to end the editing session with either the *ET or *ES command, not *E.

3.5 Some differences in SPSS description files

The broad difference between the VAX implementation of SPSS and the PDP-1Ø implementation is that VAX-SPSS adheres more closely to the rules, etc described in the SPSS manuals. This implies that certain cards and switches used commonly on the KL1Ø by SPSS users are not appropriate on the VAX and should not be used.

In particular, the following modifications should be noted by most users:

(a) INPUT MEDIUM DISK

i.e. the keyword DISK (and not a file specification) must be associated with the INPUT MEDIUM card.

This keyword indicates to SPSS that the data is contained in FORØØ8.DAT or in a file linked to FORØØ8 through a previously-issued ASSIGN command.

Note: As for the PDP-1Ø, if the keyword CARD is used in the specification field of an INPUT MEDIUM card, then the data should follow the READ INPUT DATA card.

(b) ASSIGN BANKS is an invalid control field entry.

Instead, you may use the keyword BLANK in the speciation field of a RECODE card, as described in the SPSS manual, i.e.

RECODE varlist (BLANK = value)

(c) For all non-numeric variables, a PRINT FORMATS card is necessary. (i.e. VAX-SPSS does not use the input format for a variable as the print format also, as happens in SPSS-1Ø). Similarly, for real variables with values containing decimal places, a PRINT FORMATS card is required of the form

PRINT FORMATS Varlist (n)

where you require such variables to be output with n decimal places (the default is Ø).

(d) The familiar /EDIT switch must be replaced by an EDIT card in the description file. [Don't forget to remove it for the real run!]

(e) The /SPACE:n switch becomes unnecessary because of the way in which the SPSS command is issued (see section 2(b) above).

(f) However, it is now possible to use the MERGE FILE card, as described in the SPSS manual.

While the above list is not exhaustive, it contains those changes which may be necessary for the most general audience of SPSS users. Other changes, refinements, etc. may be commented upon in later issues of the Newsletter.

Barry Maher
extension 3Ø21

4.Ø INFORMATION CONCERNING COURSES

The schedule of courses to be conducted by the Centre for the remainder of 1981 is given below. (This information is now available also by typing the file HLP:COURSE.HLP).

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General Notes:

1. Users not familiar with the PDP-1Ø system must attend the course "Introduction to the PDP-1Ø" before enrolling in other courses.

2. All courses (except those designated as G.U.) are held in the Client Room, Hawken Building, St Lucia.

3. No charge is made for staff and post-graduate students attending these courses. All other users are required to pay a fee of $1Ø.ØØ per half-day session.

September Courses:

1. SPSS	: September 7 - September 11 5 half-days 9.ØØam - 12.3Øpm each day
2. SOS Editor	: September 7 - September 8 2 half-days 2.ØØ-5.ØØpm each day
3. *G.U. VAX	: During week September 14 - September 18

October Courses:

1. VAX (tentative)	: During week October 5 - October 9
2. Elementary BASIC Programming	: October 19 - October 21 3 full days 9-12am +2-5pm each day
3. VAX (tentative)	: During week October 26 - October 3Ø

November Courses:

1. Introduction to PDP-1Ø	: November 2 - November 3 2 full days 9-12am + 2-5pm each day
2. Introduction to PDP-1Ø	: November 5 - November 6 2 full days 9-12am + 2-5pm each day
3. RUNOFF	: November 9 - November 11 3 full days 9-12am + 2-5pm each day
4. SPSS	: November 16 - November 2Ø 5 half-days 9.ØØam - 12.3Øpm each day
5. VAX (tentative)	: During week November 16-November 2Ø (afternoons only)
6. Elementary FORTRAN	: November 3Ø - December 4 5 full days 9-12am + 2-5pm each day

Enrolments for all courses may be made by contacting

Barry Maher
extension 3021

5.0 HANDY HINTS DEPARTMENT

Here are two useful little ditties suggested by Prof Stephenson of Zoology.

The first is a 'recipe' for those people who create data files with large quantities of zeros in them. The recipe allows you to tell the editor program how many zeros to put in.

Imagine you're creating one of these files using the CREATE or EDIT command. You have a line with some numbers on it (say, "1002"), and need 25 zeros added on. Here's what to do (assume you've found the line). The underlined text is what you would type in.

```
*AP./0/;REPE 24;P
10020000000000000000000000000
*
```

the line now has 25 zeros appended to it!

What happenned? The APPEND command was used to put one zero onto the line. The REPEAT command then did that 24 times, giving a total of 25 zeros. Finally the PRINT command displayed the line.

You can do this with any character, or string of characters. Whatever you want repeated goes between the slashes. The number following the REPEAT command must be one less than the total number of repetitions.

You can find out more detail about those commands in the Centre's EDIT manual.

The next useful hint for today is about plotting. The large plotter (a CALCOMP 936) has three pens, allowing you to do multicoloured plots.

You might find yourself in the situation where you want different pens to the default, but your plotting program isn't smart enough to be able to change them. A way around this is to generate a short plot which asks for the wanted pens. Plot this small plot, then the real one. There's a program to generate these short plots, called PENS.EXE on DSKG:[107,111]. Here's how you would run it - underlined text is

what you type in.

```
.ASS DSK PLT
DSK assigned

.RUN DSKG:PENS[107,111]

   **** Did you type ".ASS DSK PLT"   first? ****

What colour do you want for PEN 1 ? BLUE
What colour do you want for PEN 2 ? RED
What colour do you want for PEN 3 ? GREEN


OK, If you've been good, you should
have a file called PENS.DAT.

To use it, when you go to plot your file,
say   "PLOT PENS.DAT,whatever.PLT"

(don't forget to type   "DEASS"  to deassign the plotter.! )

END OF EXECUTION
CPU TIME: 0.12  ELAPSED TIME: 12.38
Exit

.DEASS


.PLOT PENS.DAT,XYZZY.PLT
```

The program reminds you of what to do as you go along. It produces a file called PENS.DAT . You can re-use this file as many times as you want.

This method shouldn't be considered as the 'usual' way of doing pen colour changes. If it's at all possible, use the SETPEN subroutine in your plot generating program, which you can find out more about in the Centre's PLOTTING manual.

Mark Williams
extension 2837

S Y S T E M P E R F O R M A N C E R E P O R T

For node KA1Ø there were 29 working days in the period 1/Jul/81 to 31/Jul/81

		< KA1Ø > HHH:MM	%
1.	Attended system running time	481:Ø3	
2.	Plus unattended system running time	164:16	
3.	Equals total system running time	645:19	1ØØ.Ø
	less time used for:		
4.	Scheduled maintenance	19:47	3.1
5.	Dedicated operations tasks	3:Ø5	Ø.5
6.	Dedicated systems development	Ø:ØØ	Ø.Ø
7.	Equals time scheduled for use	622:27	96.5
	less lost time due to:		
8.	Unscheduled maintenance	13:28	2.1
9.	Hardware faults	1:51	Ø.3
1Ø.	Software faults	Ø:ØØ	Ø.Ø
11.	Unresolved	Ø:56	Ø.1
12.	Environmental conditions	56:16	8.7
13.	Equals time available to users	549:56	85.2
14.	Effective user uptime (13./7.)		88.3
15.	Number of crashes		4
16.	Mean availability between crashes		137:29
17.	Mean time to recover crashes (minutes)		42
18.	Total number of Jobs		1657

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S Y S T E M P E R F O R M A N C E R E P O R T

For node KL1Ø there were 27 working days in the period 1/Jul/81 to 31/Jul/81

		< KL1Ø >		< DN87A >		< DN87B >	
		HHH:MM	%	HHH:MM	%	HHH:MM	%
1.	Attended system running time	479:24		479:24		479:24	
2.	Plus unattended system running time	114:42		114:42		114:42	
3.	Equals total system running time	594:Ø6	1ØØ.Ø	594:Ø6	1ØØ.Ø	594:Ø6	1ØØ.Ø
	less time used for:						
4.	Scheduled maintenance	19:53	3.3	19:53	3.3	19:53	3.3
5.	Dedicated operations tasks	9:22	1.6	9:22	1.6	9:22	1.6
6.	Dedicated systems development	3:35	Ø.6	3:35	Ø.6	3:35	Ø.6
7.	Equals time scheduled for use	561:16	94.5	561:16	94.5	561:16	94.5
	less lost time due to:						
8.	Unscheduled maintenance	7:31	1.3	Ø:ØØ	Ø.Ø	Ø:ØØ	Ø.Ø
9.	Hardware faults	6:49	1.1	Ø:ØØ	Ø.Ø	Ø:ØØ	Ø.Ø
1Ø.	Software faults	Ø:36	Ø.1	Ø:ØØ	Ø.Ø	Ø:ØØ	Ø.Ø
11.	Unresolved	1:Ø1	Ø.2	Ø:1Ø	Ø.Ø	Ø:Ø8	Ø.Ø
12.	Environmental conditions	16:Ø8	2.7	16:Ø8	2.7	16:Ø8	2.7
13.	Equals time available to users	529:11	89.1	544:58	91.7	545:ØØ	91.7
14.	Effective user uptime (13./7.)		94.3		97.1		97.1
15.	Number of crashes		25		3		2
16.	Mean availability between crashes		21:1Ø		181:39		272:3Ø
17.	Mean time to recover crashes (minutes)		2Ø		3		4
18.	Total number of Jobs		13281				

S Y S T E M P E R F O R M A N C E R E P O R T

For node GRIFFITH there were 27 working days in the period 1/Jul/81 to 31/Jul/81

		< GRIFFITH >	
		HHH:MM	%
1.	Attended system running time	178:38	
2.	Plus unattended system running time	346:46	
3.	Equals total system running time	525:24	100.0
	less time used for:		
4.	Scheduled maintenance	0:00	0.0
5.	Dedicated operations tasks	0:00	0.0
6.	Dedicated systems development	0:00	0.0
7.	Equals time scheduled for use	525:24	100.0
	less lost time due to:		
8.	Unscheduled maintenance	0:44	0.1
9.	Hardware faults	0:16	0.1
10.	Software faults	0:05	0.0
11.	Unresolved	1:41	0.3
12.	Environmental conditions	8:51	1.7
13.	Equals time available to users	513:47	97.8
14.	Effective user uptime (13./7.)		97.8
15.	Number of crashes		12
16.	Mean availability between crashes		42:49
17.	Mean time to recover crashes (minutes)		10

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S Y S T E M P E R F O R M A N C E R E P O R T

For node COMMERCE there were 22 working days in the period 1/Jul/81 to 31/Jul/81

		< COMMERCE	>
		HHH:MM	%
1.	Attended system running time	184:05	
2.	Plus unattended system running time	0:00	
3.	Equals total system running time	184:05	100.0
	less time used for:		
4.	Scheduled maintenance	0:00	0.0
5.	Dedicated operations tasks	0:00	0.0
6.	Dedicated systems development	0:00	0.0
7.	Equals time scheduled for use	184:05	100.0
	less lost time due to:		
8.	Unscheduled maintenance	0:00	0.0
9.	Hardware faults	1:06	0.6
10.	Software faults	0:00	0.0
11.	Unresolved	0:37	0.3
12.	Environmental conditions	7:18	4.0
13.	Equals time available to users	175:04	95.1
14.	Effective user uptime (13./7.)		95.1
15.	Number of crashes		4
16.	Mean availability between crashes		43:46
17.	Mean time to recover crashes (minutes)		26